

Paragraph 2 of the Office Action misstates the facts surrounding Applicants' Response to the Restriction Requirement. On February 17, 2004, Examiner Cleveland telephoned Applicants' representative and issued a telephonic Restriction Requirement between Group I claims 1-4, 7 and 9, and Group II, claims 5, 6, 8 and 10. Applicants provisionally elected Group I, claims 1-4, 7 and 9, with traverse. On February 24, 2004, Applicants filed a Confirmation of Telephone Election which stated, in pertinent part, that "[s]aid provisional election was specifically made with traverse since no basis therefor has been set forth in the written record." In the November 29, 2004 response, Applicants simply stated that "Claims 1-10 are pending in this application. Claims 5, 6, 8 and 10 are withdrawn from consideration." Applicants did not need to further specify that the previously made election was with traverse because such an assertion was already of record.

Claims 5, 6, 8 and 10 depend directly or indirectly from independent claim 1. As such, upon finding independent claim 1 allowable for the reasons set forth below, Applicants respectfully request rejoinder and allowance of claims 5, 6, 8 and 10.

**II. The Assertion That the Information Disclosure Statement Filed October 31, 2005 Fails to Comply With the Rules is Not Correct**

The Office Action, in paragraph 3, indicates that the Information Disclosure Statement (IDS) filed October 31, 2005 fails to comply with 37 C.F.R. §1.98(a)(1). Applicants respectfully submit that the IDS was properly filed on October 31, 2005, but was apparently improperly scanned into the Patent and Trademark Office's database upon receipt, as is evidenced by the existence of the cover page of the IDS on the PTO Public Pair website and nothing else. Applicants enclose a copy of the October 31, 2005 IDS including the Form PTO-1449, and a copy of the date-stamped PTO filing receipt as evidence that Applicants' October 31 IDS was fully compliant with the rules.

Applicants respectfully request, in any next Office Action to issue regarding this application, that the Examiner initial and return a copy of the attached Form PTO-1449 as evidence of having considered Applicants' October 31 IDS.

**III. The Substitute Specification is Compliant With the Rules and Introduces No New Matter**

The Office Action, in paragraph 4, asserts that the Substitute Specification filed November 29, 2004 has not been entered because it seeks to add new matter into the specification, and it does not conform to the rules. 37 C.F.R. §1.125 does not require the marked-up copy of the originally filed specification be written either by a typewriter or machine printer. Therefore, Applicants respectfully submit that the Substitute Specification, as submitted, conforms to the applicable rules.

Additionally, with respect to the alleged new matter in the Substitute Specification, the specific information identified by the Examiner, "[i]n this case, the discharged ink composition 17a spreads out and blends into the hole injection/transport layer 16, without for the most part adhering to the organic substance bank layer 12b, which has previously undergone an ink repellent treatment. As a result, even when this ink composition 17a is mistakenly discharged onto the . . .," included in paragraph [0084] is alternatively included, with respect to another embodiment, in at least paragraph [0061] of the originally filed disclosure. Careful review of the priority document JP-2001-353682 reveals that this information was left out when translating this application from that priority document.

For both of the above reasons, Applicants respectfully assert that the Substitute Specification does not introduce new matter, because the features with which the asserted new matter concerns are now raised, are included in a different portion of the original specification.

**IV. The Claims Recite Allowable Subject Matter**

The Office Action, in paragraph 6, rejects claims 1 and 2 under 35 U.S.C. §103(a) as being unpatentable over WO 98/24271 to Miyashita et al. (hereinafter "Miyashita" refers to the national stage entry of Miyashita, U.S. Patent Application Publication No. 2003/0054186) in view of U.S. Patent No. 6,174,613 to Antoniadis et al. (hereinafter "Antoniadis"). Additionally, the Office Action, in paragraph 7, rejects claims 3, 4, 7 and 9 under 35 U.S.C. §103(a) as being unpatentable over Miyashita in view of Antoniadis and further in view of U.S. Patent No. 5,921,836 to Nanto et al. (hereinafter "Nanto"). These rejections are respectfully traversed.

Miyashita discloses a method of manufacturing an organic electroluminescent (EL) element. The Office Action concedes that Miyashita does not explicitly teach (1) that at least two of the inks discharged above a substrate include more than one EL material, as positively recited in claims 1 and 2, or (2) that the order of discharging of such inks is based on the ink with the least number of EL materials, as positively recited in claim 1. The Office Action asserts simply that it is extremely well known in the art of electro-luminescent devices to use doped layers. The Office Action relies on the disclosure of Antoniadis (col. 3, lines 36-57) as evidence that such is well known in the art. The Office Action goes on to conclude that it would have been obvious to have deposited such inks for all three colors because such doped inks are known in the art as suitable EL ink. While it may be true that Antoniadis can be applied for the proposition that such inks contain multiple organic EL materials are known, such does not render obvious the order in which the materials are deposited on the substrate, as is positively recited in at least independent claims 1 and 2.

The Office Action attempts to address this shortfall by asserting that it is well settled that the selection of any order of performing process steps is *prima facie* obvious in the absence of new and unexpected results. The Office Action incorrectly concludes that there is no showing in the application that is commensurate in scope with the claims to demonstrate

new or unexpected results. In making this assertion, the Office Action must ignore the specifically disclosed and recited inventive step of this application, i.e., ordering discharging said compositions of other substrates starting with a composition which has a fewest number of organic electro-luminescent material. Applicants respectfully assert that the order of discharging the EL materials, in which the compositions with the fewest number of EL materials, and the most difficult to be phase separated, are discharged first, thus resulting in the prevention of the phase separation commonly experienced with multiple compositions of EL materials (see paragraphs [0012]-[0013]). Therefore, the phase separation due to re-dissolution following completion of the discharge formation of the film can be reduced or prevented, thus making it possible to provide a manufacturing method of organic EL devices having superior display properties. Thus, the subject matter of the pending claims specifically addresses a problem of the prior art, in that in the case of a plurality of organic EL materials, in order to obtain the desired light characteristics, it is necessary to form a layer in a state in which each of the organic EL materials is uniformly mixed without separation [paragraph 0008].

There is nothing in Miyashita or Antoniadis, nor is there any evidence of such an observation in the prior art presented in the Office Action, that allows the Examiner to ignore this discussion in Applicants' disclosure and to attempt to fill in a gap in the obviousness analysis by asserting that this positively recited claim feature would have been obvious.

The Office Action, in its conclusory statement that such would have been obvious not only must ignore the positive discussion in the disclosure, but must also apply improper hindsight reasoning based on Applicants' disclosure in order to assert that subject feature would have been obvious, and must also ignore Federal Circuit precedent that "rejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, Appeal No. 04-1616, March 22, 2006 (Fed. Cir.).

*See also, In re Lee*, 277 F.3d 1338, 1343-46 (Fed. Cir. 2002), and *In re Rouffet*, 149 F.3d 1350, 1355-59 (Fed. Cir. 1998). The reliance on the precedent stated in *In re Burhans* from the Court of Claims and Patent Appeals, circa 1946, although quoted in the MPEP at the section that the Examiner indicates in the Office Action, is probably dated in light of all of the decisions in the ensuing 60 years. Reliance therefore on this precedent, in the absence of articulated objective evidence of record from the prior art which is proffered with some rational underpinning for why such evidence supports a *prima facie* case of obviousness therefore necessarily fails.

Additionally, Nanto does not overcome the deficiencies of Miyashita and Antoniadis as discussed above.

For at least the above reasons, Miyashita, Antoniadis and Nanto cannot reasonably be considered to teach, or to have suggested, all of the features recited in independent claims 1 and 2. Further, claims 3, 4, 7 and 9 are also neither taught, nor would they have been suggested, by any permissible combination of the applied references, for at least the respective dependence of these claims on independent claims 1 and 2, as well as for the separately patentable subject matter that each of these claims recites.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-4, 7 and 9 under 35 U.S.C. §103(a) as being anticipated by the applied references as discussed above, are respectfully requested.

The Office Action, in paragraph 8, rejects claims 1 and 2 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,447,934 to Suzuki et al. (hereinafter "Suzuki") in view of U.S. Patent No. 6,114,805 to Codama et al. (hereinafter "Codama") and U.S. Patent No. 3,796,930 to Page. The Office Action, in paragraph 9, rejects claims 1-3 and 7 under 35 U.S.C. §103(a) as being unpatentable over Suzuki in view of Antoniadis. The Office Action, in paragraph 10, rejects claims 4 and 9 under 35 U.S.C. §103(a) as being unpatentable over

Suzuki and Antoniadis, as applied to claims 3 and 7, and further in view of Miyashita. The Applicants respectfully traverse these rejections.

Suzuki discloses an organic electroluminescent panel having two luminescent layers interposed between a pair of electrode layers (Abstract). The Office Action concedes that Suzuki does not teach that each layer is formed by discharging the composition from a single source above the substrate. Further, the Office Action concedes that the combination of Suzuki and Antoniadis does not teach that the first electrode is divided into pixel electrodes corresponding to the substrate. The Office Action relies on various combinations of Codama, Page, Antoniadis and Miyashita to overcome these deficiencies of the applied prior art references, as enumerated above.

Applicants submit that the Office Action fails to make a *prima facie* case of obviousness with respect to (1) ordering discharging said compositions above the substrate starting with a composition which has the fewest number of organic electro-luminescent materials, as is positively recited in independent claim 1, and, (2) when discharging compositions which have the same number of organic EL materials, ordering discharging the composition above the substrate with a composition which is most difficult to be phase separated after the layer is formed, as is positively recited in independent claim 2.

MPEP §2142 states, "[t]he Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." Additionally, §2142 states, "[t]o establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations."

Applicants submit that this standard is not met, as discussed below, and as asserted in the Office Action.

Further clarifying "suggestion or motivation," the Federal Circuit has held that §103 requires assessment of the invention as a whole. Specifically, "[t]his as a whole assessment of the invention requires a showing that an artisan of ordinary skill in the art at the time of the invention, confronted by the same problems as the inventor and with no knowledge of the claimed invention, would have selected the various elements from the prior art and combined them in the manner claimed." *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004). The Federal Circuit went on to state, "[i]n other words, section 103 requires some suggestion or motivation, before the invention itself, to make the new combination." *Id.*

The Examiner's assertion that Example 3, of Suzuki, teaches ordering formation starting with a composition which has a fewest number of organic EL materials, is conclusory. The Office Action merely identifies, in Suzuki, an arbitrary ordering of EL materials. Specifically, Example 3 illustrates the fine tuning of the chromaticity of the mixed light by increasing the kinds of fluorescent materials doped on the luminescent layers, as is discussed with relation to the prior art in the pending specification in at least paragraphs [0007] and [0008]. However, Suzuki is silent regarding the problem addressed by the subject matter of the pending claims, the respective organic electro-organic-luminescent materials phase separating, as discussed in at least paragraphs [0008] and [0009] of the Applicants' specification. Therefore, Suzuki, in any permissible combination with the applied prior art references enumerated above, cannot reasonably be considered to teach, or even suggest, not only does not teach the specific ordering recited in the pending claims but, Suzuki also does not recognize the desirability of ordering the EL materials starting with those with the fewest number of organic EL materials. Therefore, Applicants submit that one of ordinary skill in the art, confronted with the same problem as the inventors and with no knowledge of the claimed invention, would not have selected the various elements from the prior art and combined them in the manner suggested, as the asserted prior art provides no such suggestion

or motivation for making such a combination and no recognition of Applicants' problem as is addressed by the subject matter of the pending claims.

Further, Suzuki, in any permissible combination with the applied prior art references, as enumerated above, is silent regarding any evidence as to support a reasonable expectation of success for making such a combination. Specifically, the applied references are silent regarding any expectation of success that the layering exhibited in Example 3, of Suzuki, would in any manner prevent phase separation due to re-dissolution following discharge, as is discussed in the pending specification (paragraph [0012]) nor is there any recognition in Suzuki that this problem exists and should therefore be addressed.

In summary, the Office Action does not support a *prima facie* case of obviousness for at least the reason that any permissible combination of the applied prior art references, as enumerated above, do not teach, or suggest, all of the claim limitations. Specifically, (1) ordering discharging said compositions above the substrate starting with a composition which has the fewest number of organic electro-luminescent materials, as is positively recited in independent claim 1, and (2) when discharging compositions which have the same number of organic EL materials, ordering discharging the composition above the substrate with a composition which is most difficult to be phase separated after the layer is formed, as is positively recited in independent claim 2, as discussed above.

For at least the above reasons, any permissible combination of Suzuki with Codama, Page, Antoniadis and/or Miyashita cannot reasonably be considered to teach, or even to have suggested, the combinations of all of the features recited in at least independent claims 1 and 2. Further, claims 3, 4, 7 and 9 are also neither taught, nor would they have been suggested, by the applied prior art references for at least the respective dependence of these claims on allowable independent claims 1 and 2, as well as for the separately patentable subject matter that each of these claims recites.

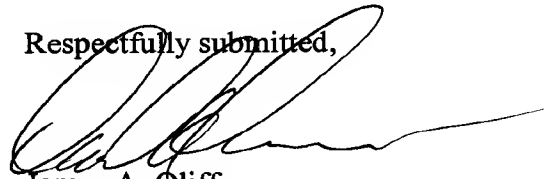


Accordingly, reconsideration and withdrawal of the rejections of the subject matter of claims 1-4, 7 and 9 as being unpatentable by any permissible combination of the applied prior art references are respectfully requested.

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of claims 1-4, 7 and 9 are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,



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Attachments:

Confirmation of Telephone Election and PTO filing receipt  
October 31 Information Disclosure Statement with Form PTO-449  
Date-stamped Filing Receipt

Date: July 17, 2006

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